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Cass R. Sunstein*

Abstract

Many regulators have concluded that cost-benefit analysis is the best available method for capturing the welfare effects of regulations. It is therefore understandable that in recent years, some people have been interested in requiring financial regulators to engage in careful cost-benefit analysis of their regulations, and to proceed only if the benefits justify the costs. Ideas of this sort have played a significant role in judicial review of agency action, especially in cases involving the Securities and Exchange Commission. But it is important to distinguish the question whether courts should require cost-benefit analyses, and review them for arbitrariness, from the separate question whether financial regulators should produce such analyses. It is also important to understand that in some cases, cost-benefit analysis presents serious challenges for financial regulators. When agencies lack relevant information, and cannot project benefits (or costs), they can invoke established techniques to discipline the question whether and how to proceed. In particular, breakeven analysis plays a valuable role. Of course it remains possible that in rare cases, agencies have so little information that they cannot even use breakeven analysis. In such cases, it is not helpful to refer to the precautionary principle or to "expert judgment." In such rare cases, the best that agencies may be able to do is to rely on some version of maximin, while also seeking to fill informational gaps over time.

I. Separating Questions

Should financial regulators engage in cost-benefit analysis? If so, should some institution require them to do so? If so, should that institution be the federal judiciary, the President, or Congress?

It is important to separate these questions. Suppose that we agree that cost-benefit analysis is the best available method for capturing the welfare effects of regulation.[1] It would seem to follow that financial regulators should produce cost-benefit analyses, and that the outcome of those analyses should influence their

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[1] See Matthew Adler and Eric Posner, New Foundations of Cost-Benefit Analysis (2006): Cass R. Sunstein, Valuing Life (2014).

decisions. But it need not follow that courts should require such analyses, or review their use.[2] To know whether courts should take such steps, it is necessary to investigate both the costs of decisions and the costs of errors. It is possible that judicial review would itself fail cost-benefit analysis. Such review would undoubtedly increase the costs of decisions, if only because of the additional time spent on litigation, and also on the range of work, at the agency level, that would have to be undertaken in preparation for judicial review.

With respect to the costs of errors, the question is whether judicial review would be helpful or harmful. On the one hand, such review could decrease the likelihood of mistakes on the part of agencies, creating an ex post corrective and an ex ante deterrent.[3] If the prospect of judicial review strengthens the hand of the best analysts, or diminishes the role of politics and interest groups, then it could have quite large benefits. From the standpoint of social welfare, this might be a significant gain. On the other hand, judges might themselves err. They are generalists, not specialists, and their own understanding of the complex questions involved in financial regulation is likely to be limited.

Moreover, judges might have some kind of ideological tilt, increasing the risk of unpredictability and also mistakes. There is every reason to think that on a three-judge panel consisting of three Republican appointees, an industry challenge to financial regulation will receive a sympathetic hearing, far more so than if the challenge is made before a panel of Democratic appointees.[4] In some cases, industry challengers will win when they ought to lose, and if public interest groups challenge financial regulations, the same conclusion holds. These points are hardly decisive against judicial review of cost-benefit analysis by financial regulators, but they do introduce a cautionary note. If review is in some sense politicized, a degree of unpredictability will be inevitable, and at least some of the time, judicial decisions will be biased and therefore inaccurate. Under prevailing Executive Orders, executive agencies are generally required to conduct cost-benefit analysis for significant regulations, but it is noteworthy that courts are not authorized to review that analysis.[5]

Suppose that judicial review is or should be unavailable. If so, should the President require cost-benefit analyses by financial regulators to be subject to the process overseen by the Office of Information and Regulatory Affairs (OIRA)? Insofar as the Department of Treasury is responsible, in whole or in part, for a financial regulation, OIRA does and will have its ordinary role, because the Department of Treasury is an executive agency.[6] But if independent agencies are

[2] For an example of judicial review, see Corrosion Proof Fittings v. EPA, 947 F.2d 1201 (5th Cir. 1991).
[3] A relevant decision is Business Roundtable v. SEC, 647 F.3d 1144 (2011).
[4] See Thomas J. Miles & Cass R. Sunstein, The Real World of Arbitrariness Review, 75 University of Chicago Law Review 761 (2008).
[5] Executive Order 13563; Executive Order 12866.
[6] There is an exemption for rules from the Internal Revenue Service.

the rulemakers, and if no executive agency is involved, the OIRA process does not apply.

Many people would like to subject independent agencies, including financial regulators, to that process.[7] If cost-benefit analysis is valuable as a way of assessing the welfare consequences of rules, their arguments might turn out be convincing.[8] But here as well, it is necessary to investigate the costs of decisions and the costs of errors, and an argument that seems persuasive in the abstract might be less so once we consider the details. There is no question that OIRA review would increase the costs of decisions, if only because the process is time-consuming and may produce significant delays. There is also a question of capacity: OIRA staff is relatively small, and it does not now have a great deal of expertise on financial regulation in particular. It would be challenging for OIRA to review financial regulations without adding more personnel.

With respect to errors, OIRA (along with its numerous collaborators within the executive branch) does specialize in cost-benefit analysis. Its familiarity with the relevant tools, and with the uses and limits of such analysis, would likely produce improvements. And indeed, OIRA has already worked with some financial regulators, on an informal basis, to strengthen their analyses.[9] The question is whether those improvements would be large enough to justify a significant institutional reform. A reasonable conclusion is that if OIRA has the personnel to engage in the review process, there is a strong argument on behalf of including financial regulators within that process -- unless there is something in the nature of financial regulation that justifies special restraint.

Finally, and more subtly, some presidents might be cautious about subjecting financial regulation to the OIRA process on the ground that if they did so, the Executive Office of the President, and the President personally, would, in a sense, "own" their decisions. It might be better, from the standpoint of the President himself, to be able to maintain a degree of distance from their decisions. Such distance could serve as an "enabling constraint," in which the President's authority is, in an important respect, increased if and because the decisions of financial regulators cannot be directly attributed to him. Of course there is a countervailing point, which is that the President cannot control such decisions, even if he believes them to be misdirected or wrong.

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[7] See, e.g., Robert W. Hahn & Cass R. Sunstein, A New Executive Order for Improving Federal Regulation - Deeper and Wider Cost-Benefit Analysis, 150 U. Pa. L. Rev. 1489 (2002).

[8] Executive Order 13579 does not subject independent agencies to OIRA review, but it does say that they "should" follow the requirements of Executive Order 13563: "Executive Order 13563 set out general requirements directed to executive agencies concerning public participation, integration and innovation, flexible approaches, and science. To the extent permitted by law, independent regulatory agencies should comply with these provisions as well."

[9] See Memorandum of Understanding, OIRA and US Commodities Futures Trading Commission, available at http://www.whitehouse.gov/sites/default/files/omb/inforeg/regpol/oira_cftc_mou_2012.pdf

If the President declines to require financial regulators to be subject to the OIRA process, should Congress take steps to mandate cost-benefit analysis? In one form, this question is the same as that faced by the President: Should Congress require financial regulations to go through OIRA? The answer to that question should largely turn on the considerations just outlined. In another form, the question would be this: If OIRA review is not mandated, should Congress nonetheless require financial regulators to produce cost-benefit analyses before they regulate? That question is very close to the question whether financial regulators should produce such analyses on their own,[10] and it is my principal topic here.[11]

II. Cost-Benefit Analysis and the Knowledge Problem

A. A Definition

What does cost-benefit analysis entail? A full account would require an elaborate discussion (and for present purposes, its benefits would not justify its costs).[12] Very briefly, let us understand such analysis to involve an effort (1) to quantify the anticipated consequences of regulatory action and (2) to monetize those consequences in terms of benefits and costs, subject to (3) a feasibility constraint, meant to acknowledge that some consequences may be hard or impossible either to quantify or monetize.

This understanding is consistent with Executive Order 13653, which directs executive agencies "to use the best available techniques to quantify anticipated present and future benefits and costs as accurately as possible," but which adds that agencies "may consider (and discuss qualitatively) values that are difficult or impossible to quantify, including equity, human dignity, fairness, and distributive impacts."[13] It is important to emphasize that under prevailing Executive Orders, cost-benefit analysis is not merely a procedural requirement. To the extent permitted by law, agencies must show that the benefits justify the costs, and also that they have chosen the approach that maximizes net benefits.[14] If these requirements are not met, agencies are not permitted to go forward unless the law requires them to do so.

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[10] A valuable discussion is Eric Posner and E. Glen Weyl, Benefit-Cost Analysis And Financial Regulations, 103 Am Econ Rev (Papers and Proceedings) 393 (2013).

[11] See Eric Posner and E. Glen Weyl, Benefit-Cost Paradigms in Financial Regulation (2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2346466: "Indeed, BCA would seem more appropriate for financial regulation where data are better and more reliable, and where regulators do not confront ideologically charged valuation problems like those concerning mortality risk and environmental harm. The benefits and costs of financial regulation are commensurable monetary gains and losses, and so can be easily compared."

[12] OMB Circular A-4, available at http://www.whitehouse.gov/omb/circulars_a004_a-4, offers many details.

[13] See Executive Order 13563, 76 Fed Reg 3821 (2011)

[14] Id.

B. Who Knows?

To undertake cost-benefit analysis, agencies have to overcome what followers of Friedrich Hayek call the "knowledge problem" – the challenge that public officials face in attempting to obtain relevant information, much of which is widely dispersed in society.[15] Analysis of costs and benefits, especially when undertaken in advance, often produces daunting challenges, because of what agencies do not know. In some cases, agencies may not be able to generate point estimates. They might be able to identify only ranges, and those ranges might be quite wide. In other cases, agencies might know the likely outcomes, but they might be unable to assign probabilities to them. In such cases, involving "Knightian uncertainty," it is daunting or perhaps impossible to undertake cost-benefit analysis.[16] Agency biases of various sorts – perhaps involving the sources of information (who may have parochial interests), perhaps involving the motivations of the relevant officials, perhaps involving cognition itself – may lead to mistakes.

Let us begin with an example that is not generally thought to be uniquely daunting, and that will, for that very reason, cast light on the problem. To set out the costs and benefits of increased fuel economy standards, agencies have to know a great deal.[17] Projections of costs will have at least a degree of speculation. One reason is that technology changes over time; do we really know how much it will cost to produce a fleet-wide average or (say) 40 MPG five years from now? Another reason is that consumer demand for new automobiles can be less than predictable, especially in view of the cost increases that fuel economy standards will necessarily impose. If cars become more expensive but also more fuel-efficient, will consumers purchase fewer cars, or more, or essentially the same number? Will people herd toward fuel-efficiency, or will they move in the opposite direction? Herding can introduce a high degree of unpredictability.[18] There are also questions about the "rebound effect": If cars are less expensive to drive, consumers will drive more. But how much more? And what are the safety effects of a more fuel-efficient fleet? Estimates may turn out to be reliable, but they require a great deal of knowledge, and some speculation is likely.

Projections of benefits will also have a degree of speculation. For example, it is exceedingly challenging to monetize the "energy security" benefits that come from decreased reliance on foreign oil. If the United States decreases that reliance, how, exactly, can agencies turn the resulting benefits into monetary equivalence?[19] Nor is

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[15] A good discussion is Daniel Klein, Knowledge and Coordination: A Liberal Interpretation (2012).
[16] See Frank Knight, Risk, Uncertainty, and Profit (1921).
[17] NAT'L HIGH. TRAF. SAFETY ADMIN., FINAL REGULATORY IMPACT ANALYSIS: CORPORATE AVERAGE FUEL ECONOMY FOR MY 2017–MY 2025 PASSENGER CARS AND LIGHT TRUCKS 49 tbl. 13 (2012).
[18] On this point, and the limits of prediction, see Duncan Watts, Everything Is Obvious (2011).
[19] NAT'L HIGH. TRAF. SAFETY ADMIN., FINAL REGULATORY IMPACT ANALYSIS: CORPORATE AVERAGE FUEL ECONOMY FOR MY 2017–MY 2025 PASSENGER CARS AND LIGHT TRUCKS (2012).

it easy to quantify the benefits of reduced air pollution. There are disputes about the mortality and morbidity benefits of reducing emissions of particulate matter, and the current projections depend on observational studies, which may not be reliable, and which in any case show a wide range of possible benefits.[20]

Among the most important benefits of fuel economy standards are reductions in greenhouse gases, but to monetize those reductions, agencies use the "social cost of carbon," a number on which there are intense disagreements, and on which reasonable people greatly differ.[21] The vast bulk of the benefits of fuel economy standards come from consumer savings,[22] but the very inclusion of such private benefits is controversial,[23] and any such projection will depend on an assessment or how many, and which, cars will be bought. Agencies must also ask whether consumers will suffer some kind of welfare loss from a more fuel-efficient fleet. In such circumstances, agencies will inevitably be required to use (somewhat speculative) ranges as well as (somewhat speculative) point estimates.

To some people, it might seem tempting to wonder, at this point, whether cost-benefit analysis is worthwhile. Numerous technical judgments must be made, and technical analysts might well disagree. In the context of fuel economy rules, they certainly do. It is child's play to suggest exceptionally wide ranges, certainly with respect to benefits, and hence it is also child's play for an informed lawyer to argue, credibly, that the agency's estimates are either too optimistic or too pessimistic, and hence that its regulation is either too stringent or too lenient.[24] But it would be a large mistake to take the absence of point estimates, and the existence of wide ranges, as a basis for skepticism about cost-benefit analysis as such.[25] Some points along the range might not be plausible; they might turn out to be debater's points, or to reflect the self-serving arguments of well-organized private groups. Even when technical experts disagree, one or another view might be turn out to be implausible or instead convincing, and agencies are entitled to decide which view falls in which category. Disagreements among experts should not be taken to mean that agencies are at sea. This point applies to financial regulators no less than to regulators of other kinds.

With cost-benefit analysis, it is at least possible to know what people are disagreeing about, and to isolate the assumptions on which certain steps would or

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[20] See Francesca Dominici et al., Particulate Matter Matters, 344 Science 257 (2014).
[21] See Michael Greenstone et al., Developing a Social Cost of Carbon for US Regulatory Analysis: A Methodology and Interpretation, 7 Environmental Economics and Policy 23 (2013); Robert S. Pindyck, Climate Change Policy: What Do the Models Tell Us? (2013), available at http://www.nber.org/papers/w19244
[22] See note supra.
[23] See Ted Gayer and W. Kip Viscusi, Overriding Consumer Preferences With Energy Regulations (2012), available at http://mercatus.org/sites/default/files/Overriding-Consumer-Preferences-with-Energy-Regulations-Final.pdf
[24] See Cass R. Sunstein, The Arithmetic of Arsenic, 90 Geo. L. J. 2255 (2002).
[25] See John Graham, Saving Lives Through Administrative Law and Economics, 157 U. Pa. L. Rev. 395 (2008).

would not be justified. There is a more fundamental point. In many cases, the analysis turns out to discipline potential conclusions, showing that certain conclusions are exceedingly difficult to justify, and that others are hard to resist.

III. Breakeven Analysis

A. A Port in a Storm

I have noted that fuel economy standards are not thought to present the most challenging problems for cost-benefit analysis. For all the complexity of the underlying issues, they do not involve the exceptionally difficult knowledge problems that agencies face in other domains. Are financial regulations exceptionally or uniquely difficult in that respect?

Some people think so.[26] There is good reason to believe that some such regulations present unusually difficult challenges.[27] But we have to be careful here. The universe of financial regulations is very large, and it is far from clear that such regulations, as such, belong in a special category. Some such regulations do not require especially unreliable predictions, and do not present particular challenges in terms of anticipating the behavior of regulated firms. As noted, the Department of Treasury is subject to the process of OIRA review, and regulations that it signs have long been accompanied by cost-benefit analyses for economically significant rules. It is probably best to say that for an important subset of financial regulations, assessment of costs and benefits is exceedingly difficult, rather than to say that that kind of assessment is exceedingly difficult for financial regulations as such. To evaluate that view, it would of course be necessary to give careful inspection to a large number of such regulations.

Let us simply stipulate, as some people believe,[28] that for some financial regulations, regulators are operating amidst a great deal of uncertainty. Suppose, for example, that a regulation is designed to reduce the risk of another financial crisis. Suppose too that the cost of such a crisis, if it should occur, is (according to expert analyses) somewhere between $500 billion and $10 trillion. Suppose finally that the agency cannot specify how much its regulation will contribute in reducing the risk of such a crisis. How, then, shall the agency proceed?

Even in the face of a great deal of ignorance, agencies have a time-honored tool with which to answer such questions, a kind of port in a storm: breakeven

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[26] See John Coates, Cost-Benefit Analysis of Financial Regulation, Yale LJ (forthcoming 2015); Jeffrey Gordon, The Empty Call for Cost-Benefit Analysis for Financial Regulators (2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2378562

[27] See Coates, supra note.

[28] See John Coates, Cost-Benefit Analysis of Financial Regulation, Yale LJ (forthcoming 2015); Jeffrey Gordon, The Empty Call for Cost-Benefit Analysis for Financial Regulators (2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2378562

analysis.[29] The central idea is simple. Suppose that a rule costs $500 million and that the agency cannot specify what the benefits are. By hypothesis, the breakeven point is $500 million, and the agency would therefore see on what assumptions or under what conditions the benefits might rise to that level. Suppose that an agency estimates that its rule will save between 60 and 250 lives per year, with 60 being a reasonable lower bound. Because the value of a statistical life is now around $9 million, the rule survives breakeven analysis.

Now consider a more difficult problem, one that is not hypothetical. A rule from the Department of Justice, designed to reduce prison rape, would cost about $500 million.[30] The problem was that the Department could not easily specify either the impact of the rule or the monetary cost of a case of prison rape. The simplest analysis would ask what the benefits would have to be to justify that $500 million expenditure. To get traction on that question, the Department might want to try to specify a lower bound for the number of prison rapes that its rule will prevent and also a lower bound for the monetary value of a case of prevented rape. If it expects to prevent at least 10,000 prison rapes, and if each case of prevented rape is worth at least $500,000, the benefits would be $5 billion – easily enough to justify the regulation. Of course the Department would need to have some basis for those projections.

Here is what the Department actually did.[31] It began by attempting to identify the value of a case of prevented rape. It used two methods to do so. First, it relied on a contingent valuation study that asked citizens, in a particular region of the United States, how much they would be willing to pay to prevent a case of rape. That study elicited a value of about $310,000 per victim, reflecting the willingness to pay of "society." Second, it examined compensation measures from the legal system, finding a value of about $480,000, with a $670,000 for juveniles. With these numbers, it generated a range of values for the prevention of a case of prison rape.

The Department did not specify the number of rapes that it expected to prevent, but it did note that the total monetizable cost of prison rape and sexual abuse is about $46.6 billion annually for prisons and jails, and an additional $5.2 billion annually for juvenile facilities. The Department concluded that if its rule prevented just 1,671 of the 260,000 annual prison rapes, its benefits of the rule would exceed its costs.[32] Many questions might be raised about the details here,[33] but so long as the agency is engaged in some kind of cost-benefit analysis, the general approach is sound. The central point is that even if some important variables are missing, or if wide ranges are inevitable, an agency might nonetheless

[29] Cass R. Sunstein, The Limits of Quantification, California L Rev (forthcoming 2014).
[30] http://ojp.gov/programs/pdfs/prea_ria.pdf
[31] Id.
[32] Id.
[33] For some notes, see Cass R. Sunstein, The Limits of Quantification, California L Rev (forthcoming 2015).

be able to use breakeven analysis to make seemingly intractable problems more tractable.

B. Breakeven Analysis and Financial Regulators

Now turn to the question of financial regulation.[34] Suppose that the cost of a new regulation, designed to reduce the risk of a financial meltdown, ranges between $700 million and $2 billion. Suppose that reasonable economists disagree on where the costs fall within that range, and that the agency is far from sure about how to resolve the disagreement. Suppose that the agency seeks to estimate the cost of a meltdown, should it occur,[35] but that the relevant range has a low end of $150 billion and a high end (for some analysts) of $3 trillion or (for other analysts) $51 trillion.[36] Remarkably, projections of this kind do not appear to be entirely unrealistic.[37] How should the agency proceed?

If the statute requires the agency to act or to refrain from acting, the case is of course easy. Perhaps the analysis of costs and benefits is legally irrelevant, as indeed it is under some statutes.[38] But suppose either that it is not or that as a matter of practice, the agency will produce that analysis even if its decision will be unaffected by it. What will the analysis look like? Is breakeven analysis feasible?

Here is one possibility. The high-end cost estimate is $2 billion. If the rule reduces the risk of a meltdown by one percent, it survives breakeven analysis even if (1) we use the low-end cost estimate for a meltdown ($150 billion) and (2) it reduces the risk of a meltdown by a small fraction of that figure (one in seventy-five). If the agency can say, plausibly, that the percentage contribution is in the requisite vicinity, or that a lower bound estimate is in that vicinity, its approach would appear to survive breakeven analysis. And if the agency notices that the costs of a meltdown might be in the trillions, that conclusion would seem exceedingly reasonable.

We could also imagine cases in which breakeven analysis establishes that a rule is unlikely to be worthwhile. Suppose that its cost is $2 billion and that the event that it is designed to prevent would have a cost of between $5 billion and $20 billion. With the upper bound of $20 billion, the question would be: Is it possible

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[34] For valuable discussion, see Eric Posner and E. Glen Weyl, Benefit-Cost Analysis for Financial Regulation**,** available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2188990

[35] See id.: "Agreement on a figure in the range $150 billion to $3 trillion (viz. a crisis cost between 1% and 20% of US GDP of approximately $15 trillion) would seem relatively easy to reach given the widely respected estimates of Reinhart and Rogoff. We would advocate a figure in the $1-2 trillion range."

[36] See Coates, supra note.

[37] Id.

[38] See Inv. Co. Inst. v. CFTC, 720 F.3d 370 (D.C. Cir. 2013), and in particular this suggestion: "The law does not require agencies to measure the immeasurable. CFTC's discussion of unquantifiable benefits fulfills its statutory obligation to consider and evaluate potential costs and benefits. .... Where Congress has required a 'rigorous, quantitative economic analysis,' it has made that requirement clear in the agency's statute, but it has imposed no such requirement here." Id. at 378.

that the rule would have a 1 in 10 chance of averting that event? If the answer to that question is no, then the rule fails breakeven analysis.

These are, of course, highly stylized examples. In other cases, standard cost-benefit analysis[39] or breakeven analysis might be much easier, even for financial regulators.[40] We might therefore suggest a simple conclusion: *In general, financial regulators should adopt the standard approach to cost-benefit analysis if it is feasible, and use breakeven analysis if it is not.*

But some people doubt that approaches of this sort can prove helpful, at least for some financial regulations.[41] In their view, some such regulations, at least at the present time and perhaps even in principle, create intractable epistemic challenges. In the case above, for example, the idea of a one in seventy-five reduction in the chance of a financial meltdown, for a single rule, might seem both high and speculative -- which would mean that we have to engage other numbers at various points in the range, much complicating breakeven analysis. In cases of this kind, the range of possible costs can be very wide, and the range of possible benefits even wider, so much so that any effort to compare the two, or even to conduct breakeven analysis, might reflect a kind of pretense to information that regulators simply lack.[42] Private adaptations, not easily anticipated, might make cost-benefit analysis especially challenging for financial regulators.[43]

This view is, in the end, a claim about how much knowledge is available. For that reason, it cannot be evaluated in the abstract. Everything depends on what regulators know, or can be expected to know. It is reasonable to think that for some financial regulators, we are now in a period not so unlike that of environmental regulators in the 1970s, when cost-benefit analysis seemed, to many observers and participants, to be impossibly daunting. There is no reason, in principle, that financial regulation as such cannot be subject to such analysis, either now or in the future.[44] But we cannot rule out the possibility that in some cases, no form of

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[39] See Posner and Weyl, supra note.

[40] Gordon, supra note, argues that because financial regulation is a constructed system, and does not involve a range of natural facts (such as the carcinogenic properties of a chemical), financial regulators cannot engage in cost-benefit analysis. It is true that the behavior of regulated entities may be difficult to anticipate and that the systemic effects of interventions may not be easily calculated. But it is not clear that the "constructed" nature of the financial system means, in principle, that changes in that system cannot be assessed in quantitative terms, at least if agencies have appropriate tools. To be sure, agencies may lack those tools. Note in this regard that in Business Roundable, supra note, the agency did quantify a number of relevant costs and benefits, though not enough to satisfy the reviewing court.

[41] Posner and Weyl, supra note.

[42] Coates, supra note.

[43] See Jeffrey Gordon, The Empty Call for Cost-Benefit Analysis for Financial Regulators (2013), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2378562

[44] A possible counterargument might come from Watts, supra note, who emphasizes the impossibility of prediction in cases in which social influences are at work. When such influences move markets – for example, cultural markets – it may be difficult or impossible to make predictions in advance, because the influences, and their effects, cannot be anticipated. Even if the counterargument is convincing, I do not believe that it applies to many regulations. A different counterargument can be found in Gordon, supra. I

breakeven analysis is realistically possible. If so, of course, regulators should be candid about what they do not know, and should identify the assumptions on which their regulation might be justified.[45] That approach promotes transparency and accountability, and also creates the right incentive to acquire additional information.[46]

III. Five Strategies in the Face of Ignorance

Suppose that with respect to costs and benefits, agencies are genuinely at sea. If the law requires them to act (or to refrain from acting), and if no one is requiring them to engage in cost-benefit analysis, then the law is relatively simple. But suppose that the law does not specify what financial regulators should do. Lacking the requisite knowledge, how should they decide whether and how to proceed?

1. Financial regulators might want to adopt a *presumption of liberty*, and thus to announce that they should not proceed, and will not proceed, unless they are able to meet some kind of burden of proof, grounded in a reasonable projection that the rule will have net benefits. They might follow a kind of precept: *In the absence of reliable evidence to support a reasonable judgment that a rule would have net benefits, they will not proceed*.

In the abstract, this idea might seem to have considerable appeal. The problem arises if agencies cannot support that judgment, simply because they lack sufficient information. Here as elsewhere, the absence of evidence is not evidence of absence. If the benefits of regulation could in fact be very large, the precept seems arbitrary and potentially self-defeating. (In parallel cases, it is hardly irrational to purchase insurance.) In view of the large role of government in the financial sector, giving rise to risks of moral hazard -- consider, as just one example, federal deposit insurance – such a presumption would be especially puzzling.

2. Financial regulators could be asked to *exercise professional judgment*.[47] Reasonable people endorse that idea,[48] but there is a serious problem, which is that

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cannot give a full discussion of that counterargument here, but see note supra and note infra for relevant notations.

[45] See Sunstein, The Limits of Quantification, supra note.

[46] Gordon, supra note, emphasizes that in this domain, "rules will create a new financial system and thus change the assumptions on the basis of which the purported cost and benefits were calculated." It is true that rules change old assumptions, in part because of private adaptation; the question is whether the calculation can be based on new assumptions. That task might well be daunting, for the reasons that Gordon outlines (see also Watts, supra note), but at least broadly similar challenges are raised by other kinds of rules, including fuel economy rules, for which cost-benefit analyses are produced as a matter of course.

[47] Coates, supra note; OMB Circular A-4, available at http://www.whitehouse.gov/omb/circulars_a004_a-4

[48] See Coates, supra note. The argument for "the pragmatics of regulatory judgment," in Gordon, supra note, seems to belong in the same general category. Gordon notes that his rejection of cost-benefit analysis "does not mean that the regulator should give up on the project of applied consequentialism, trying its best

"professional judgment" threatens to be a black box, reflecting political or ideological commitments of some kind. One official might believe that it should be easier for outsiders to have access to the ballot for proxy fights. Another official might believe that moving in that direction would be harmful to shareholders and destructive to economic growth. Without evidence that would allow some kind of projection of consequences, neither belief is worth a great deal. Note in this regard that in the context of financial regulation, "professional judgment," generally unaccompanied by disciplined analysis of costs and benefits, helped to produce the financial crisis in the first place.

The very idea of "professional judgment" is regrettably reminiscent of the performance of the old baseball scouts in Michael Lewis' bestseller Moneyball, which shows that it is far better to rely on statistical analysis than on such judgment.[49] No one denies that some kind of judgment, professional or otherwise, may be inevitable in the face of uncertainty.[50] But the emphasis on "professional judgment," emphasized in OMB Circular A-4, is not the most impressive or helpful aspect of that otherwise valuable document.

3. Financial regulators might embrace some kind of *precautionary principle*,[51] and thus to provide protection against risks even if they cannot demonstrate that such risks will come to fruition. On this approach, financial regulation would go forward in the face of a risk, whether or not the risk could be in any sense quantified. The problem with this approach is that at least in some forms, it is self-defeating.[52] Regulations that reduce risks also create risks. Certainly this is true in the financial area, for any regulation that imposes nontrivial costs will also impose risks of various kinds. It is possible to take precautions against particular risks, but it is not possible to be universally precautionary, because risk-reduction can itself be risky. Any use of some kind of precautionary principle would have to be more refined.

4. Financial regulators might follow *the maximin principle*, which means that they would eliminate the worst-case scenario.[53] On this approach, agencies might identify the worst case that would result either from regulating or from refusing to regulate. Suppose, for example, that a regulation would reduce the risk of a financial meltdown, but also impose significant costs that would fall at some point along a wide range. Suppose too that at some such points, the costs would be quite high, but

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to project the new regime and its consequences." Id. The question is whether that projection is possible without an effort to engage in at least some form of cost-benefit balancing, perhaps with the aid of breakeven analysis, and certainly with continuing monitoring of the effects of regulatory interventions. Gordon rightly emphasizes the need for such monitoring and for continuing learning on the part of regulators. Id.

[49] See Michael Lewis, Moneyball.

[50] See the complex verdict is Nate Silver, The Signal and the Noise (2013).

[51] See Daniel Steel, Philosophy and the Precautionary Principle (2014).

[52] See Cass R. Sunstein, Beyond the Precautionary Principle, 151 U Pa L Rev 1003 (2003).

[53] For detailed discussion and citations, see Cass R. Sunstein, Worst-Case Scenarios (2007).

that the worst-case scenario, connected with imposing them, is not nearly as disastrous as a financial meltdown would be. If so, there is a reasonable argument in favor of eliminating the worst of the worst-case scenarios, at least when the agency cannot assign probabilities to various outcomes.

On certain assumptions about what regulators know, that argument might ultimately prove convincing. The problem is that countless imaginable measures could be introduced to reduce the risk of catastrophe, and some of them are quite expensive. If regulators imposed all of those measures to reduce that risk, they might well create severe dislocations, and they would do so while producing what might turn out to be a long series of exceedingly small contributions to the problem. Under circumstances of uncertainty, maximin is a plausible decision rule, but its use creates serious dangers. The best response is to ask financial regulators to take steps to acquire the information that would make its use unnecessary.

5. Agencies might have to *pick*, meaning that they might not have reasons for their decisions, and they might be doing the equivalent of flipping a coin.[54] Under standard principles of administrative law, an approach of this kind is arbitrary and therefore unlawful, but in the face of genuine ignorance, it might be the best that agencies can do.[55] In terms of the goal of reasoned decision-making, this is, in a sense, the worst-case scenario. But we cannot exclude the possibility that in some cases, regulators will face it.[56] If so, they might rationally pick, while also being required to be fully transparent about what they know and do not know, and about the basis for their decision, even if it is essentially a coin flip. For obvious reasons, it should be hoped that such cases are exceedingly rare.[57]

Conclusion

In principle and as a general rule, it makes a great deal of sense for agencies to catalogue the costs and benefits of their proposed courses of action, and to proceed only if the benefits justify the costs.[58] One reason is that without such a catalogue, it is exceptionally difficult to know whether and how to proceed, at least if the goal is to promote social welfare; a secondary reason is that in its absence,

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[54] Edna Ullmann-Margalit and Sidney Morgenbesser, Picking and Choosing, 44 Social Research 757 (1977).

[55] See Adrian Vermeule, Rationally Arbitrary Decisions (in Administrative Law), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2239155 (2013), and particularly this striking claim: "There is a category of agency decisions is which it is rational to be arbitrary, in the sense that no first-order reason can be given for agency choice within a certain domain, yet some choice or other is inescapable, legally mandatory, or both. In some cases, even coin-flipping may be a perfectly rational strategy of decisionmaking for agencies."

[56] Relevant discussion can also be found in Edna Ullmann-Margalit, Big Decisions: Opting, Converting, Drifting, 58 Royal Institute of Philosophy 157 (2006).

[57] For valuable observations, see id., which emphasizes the case of individuals, but which also has implications for regulatory judgments.

[58] See Posner and Weyl, supra note.

regulations may be legally vulnerable (depending on the relevant statute).[59] At the same time, agencies sometimes face serious epistemic problems. In the context of at least some financial regulations, those problems can be especially severe, because assessment of the effects of those regulations is highly speculative.

At least to the extent feasible, financial regulators, no less than regulators of other kinds, should assess both costs and benefits, and should proceed only if the benefits justify the costs. Where important information is unavailable, such regulators should engage in breakeven analysis.

It is true that in some cases, agencies may know so little that they cannot even engage in such analysis. In such cases, the maximin principle might provide useful guidance. There is a risk, however, that the prospect of a genuine catastrophe might lead agencies to impose a series of expensive requirements – a particular problem if they cannot specify the contribution of those requirements to reducing the relevant risk. This problem suggests the immense importance of continuing to work to acquire that information. Ignorance is often reduced over time, and one of the advantages of the aspiration to full analysis of costs and benefits is that the aspiration can itself be information-forcing.

[59] See id: "The importance of developing methods for benefit-cost analysis for financial regulation can scarcely be overstated. In recent years, courts have woken up to the fact that many such regulations lack a sound economic basis and have started blocking them."